

DESIGN SUB-SURFACE DISPOSAL SYSTEM

OWNER/DEVELOPER: *Dia Dang Meditation Center*
SITE LOCATION: *APN 127-460-14*
ADDRESS: *6326 Camino Del Rey, Bonsall*

Q = Flow in Gallons per Day (GPD)
 t = Percolation Rate (Min/in)
 $A.R.$ = Application Rate = $(5/t^{1/2})$ G/(sf day)
 A = Area of Application required
 $L.L.W.$ = Leach Line Trench Width
 $L.L.L.$ = Leach Line Length
 $S.F.$ = Surge Factor = **2.07**
 $V.S.T.$ = Volume of Septic Tank = $(1125 + 0.75Q)$ (for flow > 1500 GPD) or $(1.5 \times \text{flow})$ (if < 1500 GPD)
 Q = Number of Persons \times Water Usage = GPD
 Q_a = Number of Gallons usage per day per person = GPD/P

USAGE CALCULATIONS:

We will treat the proposed Dia Dang Project as if it were an apartment complex. In addition we include additional usage for guests (visitors) on sundays. Special occasions as described in the project description will be handled with porta potties.

	# of Persons	Usage/day/person	# of days/week	Peak GPD	Average GPD
Regular occupants:	30	60 GPD	7	1800 GPD	1800 GPD
Visitors:	300	5 GPD	2	1500 GPD	429 GPD
Volunteer Workers:	4	15 GPD	2	60 GPD	17 GPD
Bedrooms:	4	150 GPD	7	600 GPD	600 GPD
Total GPD:				3960 GPD	2846 GPD

Q = 2846 GPD (for Application Area calculation / weekly average used)
 Q = 3960 GPD (for Tank Volume Calculation / peak used)

t = **11.3** min/in

$A.R.$ = $5/t^{1/2}$ = 1.49 GPSF
 A = $Q/A.R.$ = $2846/1.49$ = 1913 sq.ft

Area/ft of Trench = 1.5 sq.ft
 $L.L.L.$ = $1913/1.5 \times 2.07$ = 2640 lf plus 100% reserve area

For Horizontal Seepage Pit Length:

W = 5 ft (Trench Width)
 D = 7 ft (Trench Depth)

$L = [(3 \times L.L.L.) - (2 \times W \times D)] / (2 \times D)$
 $= [3(2640) - 2 \times 5 \times 7] / (2 \times 7)$ 561 ft plus 100% reserve area = 1122 ft

Septic Tank Size:

$V.S.T.$ = $1125 + 0.75 \times 3960$ = **4095 GAL** (holding Tank to average weekly water consumption)

Note:

It shall be noted that there are existing Holding Tanks on Site that will be used as additional overflow holding tanks if necessary.

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